

EXCEL**SO**

Indirect

WATER HEATERS



**SUPPLY HOT WATER
FOR ALL TYPES OF
BUILDINGS·PRACTICALLY
~ ~ WITHOUT COST ~ ~**

Excelso Products Corporation

A Dozen Important Facts Telling What EXCELSO Indirect Water Heaters Really Do

Q. 1. *What is an EXCELSO Indirect Water Heater?*

A. 1. An indirect heating unit that supplies ample hot water throughout all the heating season at practically no expense after once installed.

Q. 2. *How is it connected?*

A. 2. Below water line on steam and vapor (either cast iron or steel type) boilers in most cases; at times used above water line, using steam as the heating element.

Q. 3. *When is it connected?*

A. 3. At any season of the year and should be sold every time a steam or vapor boiler is installed.

Q. 4. *How does it operate?*

A. 4. The boiling water flows through shell of heater around copper coil, heating water in coil to proper temperature—passing then to storage tank—ready for all domestic uses. When used with live steam, the steam plays the same part as the boiling water but increases the capacity of the heater—see table of heating with live steam and boiling water, page 11.

Q. 5. *Is the EXCELSO Heater used for preheating oil?*

A. 5. The EXCELSO is used for preheating oil and adds to the efficiency of the oil burner, especially when heavy oils are used. Some oil burner concerns supply EXCELSO as part of their equipment.

Q. 6. *How is EXCELSO used for preheating oil?*

A. 6. In practically the same manner as when heating domestic water supply. EXCELSO folder shows typical installation for oil preheating. EXCELSO Heaters are supplied at no extra cost with admiralty metal coils and soft lead gaskets especially adapted for heavy oil preheating. Shipped direct from factory.

Q. 7. *Is EXCELSO a quality heater and why?*

A. 7. In heating water for domestic supply

with the EXCELSO not a drop of water being heated comes in contact with cast iron. The coil is connected with brass unions, giving forth clean water without rust or sediment. Comparison with other indirects tells the story.

Q. 8. *Is EXCELSO used for heating water radiation?*

A. 8. EXCELSO Indirect Heaters may be used to heat hot water radiation, forming an auxiliary heating system. Radiators may be used to heat garages, as shown on page 10, or for radiators used to warm enclosed verandas, not included on the regular steam or vapor heating plant. Details giving EXCELSO hot water radiator capacities shown on page 11.

Q. 9. *Who demand EXCELSO and where is it sold?*

A. 9. The public and trade that know the benefits of heating water by the EXCELSO Indirect Water Heater. National advertising backed by universal satisfaction creates continuous demand. Sold and installed wherever steam or vapor boilers are sold.

Q. 10. *Who supplies the demand?*

A. 10. The jobber and manufacturer in our industry who know the benefits of heating water—with constant correct temperature throughout the heating season. In many cases the heater is installed for year round service.

Q. 11. *Do the trade know how to install it?*

A. 11. Easily and quickly installed. Our trade booklet gives full directions. When once installed becomes a permanent part of the heating plant—with no comebacks.

Q. 12. *Are the sales of EXCELSO profitable?*

A. 12. Yes—and when once a trade member installs an EXCELSO he becomes a regular buyer and is a regular EXCELSO merchant—as one installation proves its efficiency and durability.



THE EXCELSE Indirect Water Heater produces hot water at the lowest known cost.

Boiling water from the heating boiler passes over the copper coil in the EXCELSE, heating the domestic supply which is passed on to the storage tank. Every drop of the domestic hot water passes through the copper coil and patented brass connections—exclusive with EXCELSE—resulting in clean, pure hot water. Simple in operation, storing hot water for all purposes night and day. No extra fire needed—no bother to owner or janitor.

EXCELSE Heaters save fuel—as the heating boiler warms the building and domestic hot water supply at the same time, one fire doing double duty. The installation of over 500,000 EXCELSE Heaters—country-wide—proves the savings and satisfaction of EXCELSE in heating the domestic supply of hot water for all types of buildings.

EXCELSE Heaters are approved by Good Housekeeping Institute. They are specified by architects and engineers, approved and sold by leading manufacturers of boilers and radiators, and supply houses. Easily connected to any type of cast iron sectional or round boiler, plain or jacketed type, or steel boiler of any make. Installed by local plumbing or heating contractor at any season of the year.

Complete information, diagrams and installing directions given in the following pages, show the simplicity of one body of water heating another body of water.

Write us concerning any special installations.

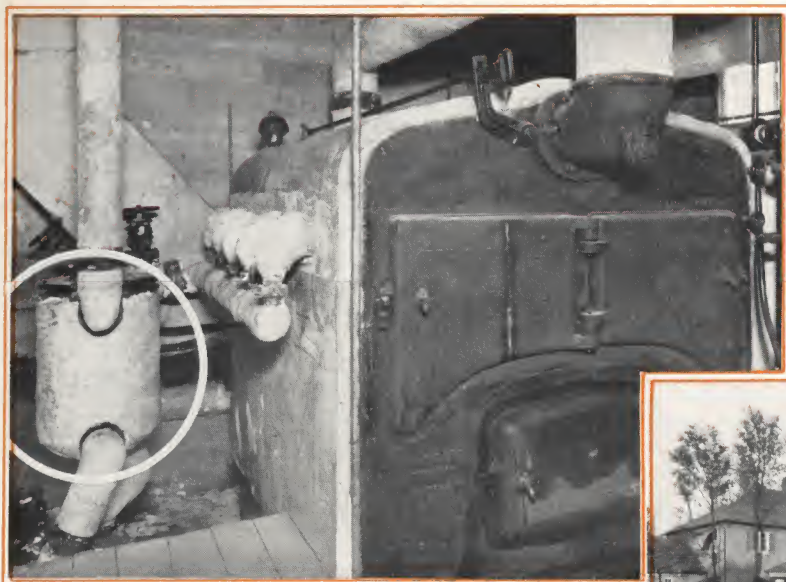
Excelso Products Corporation

DIVISION OF AMERICAN RADIATOR COMPANY

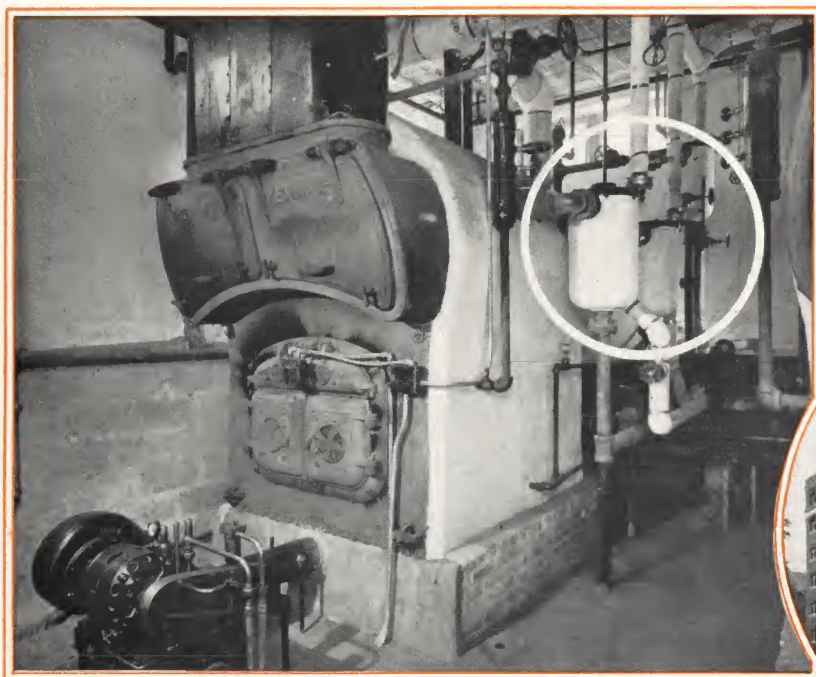
65 CLYDE AVENUE

BUFFALO, N. Y.

EXCELSO SUPPLIES HOT WATER



Typical installation of EXCELSO Indirect Water Heater in the Goodman Residence, Indianapolis, Ind. The owners of this beautiful home, like many other home owners in all localities, take advantage of their heating boiler to produce hot water at low cost by the EXCELSO method.



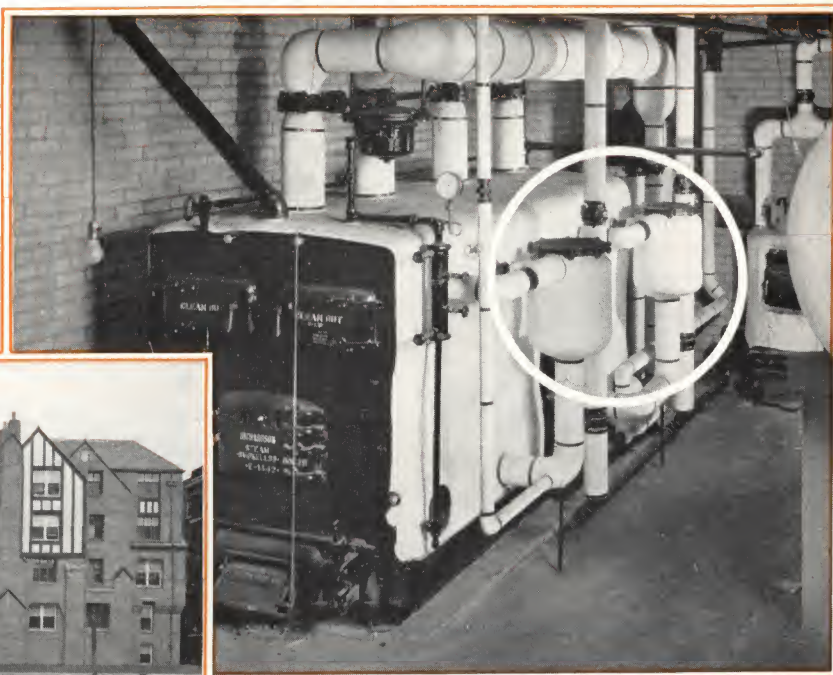
EXCELSO Indirect Heaters in the 140 room Whitman Hotel at Jamaica, L. I., produce ample hot water of the correct temperature for all the tenants. The owners of this hotel know the savings that EXCELSO Heaters produce.



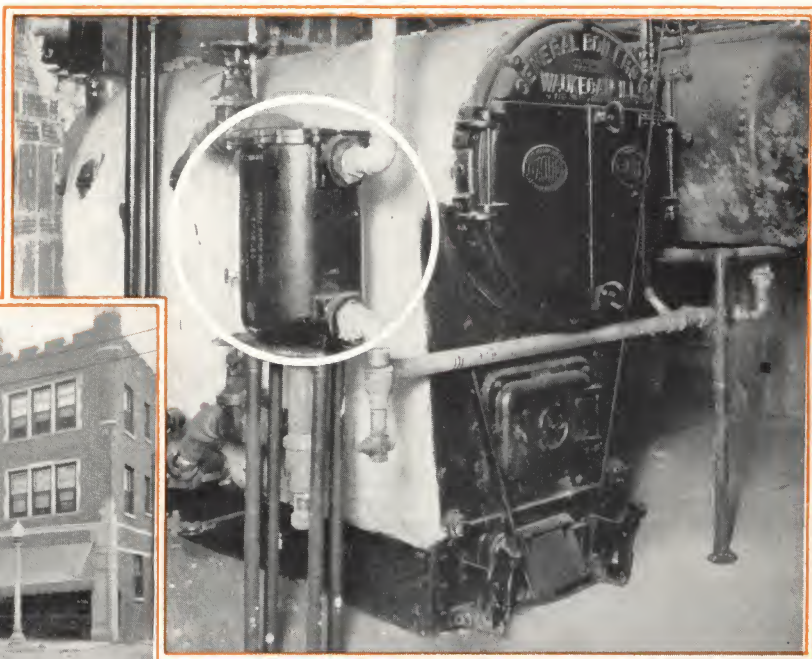
SIZES TO HEAT WATER FOR ONE

· · PRACTICALLY WITHOUT COST

EXCELSCO Indirect Heaters in the Malden Apartments, Detroit, Michigan, are saving hot water costs. The architects of this apartment specify EXCELSCO Indirect Heaters for many Detroit apartments.

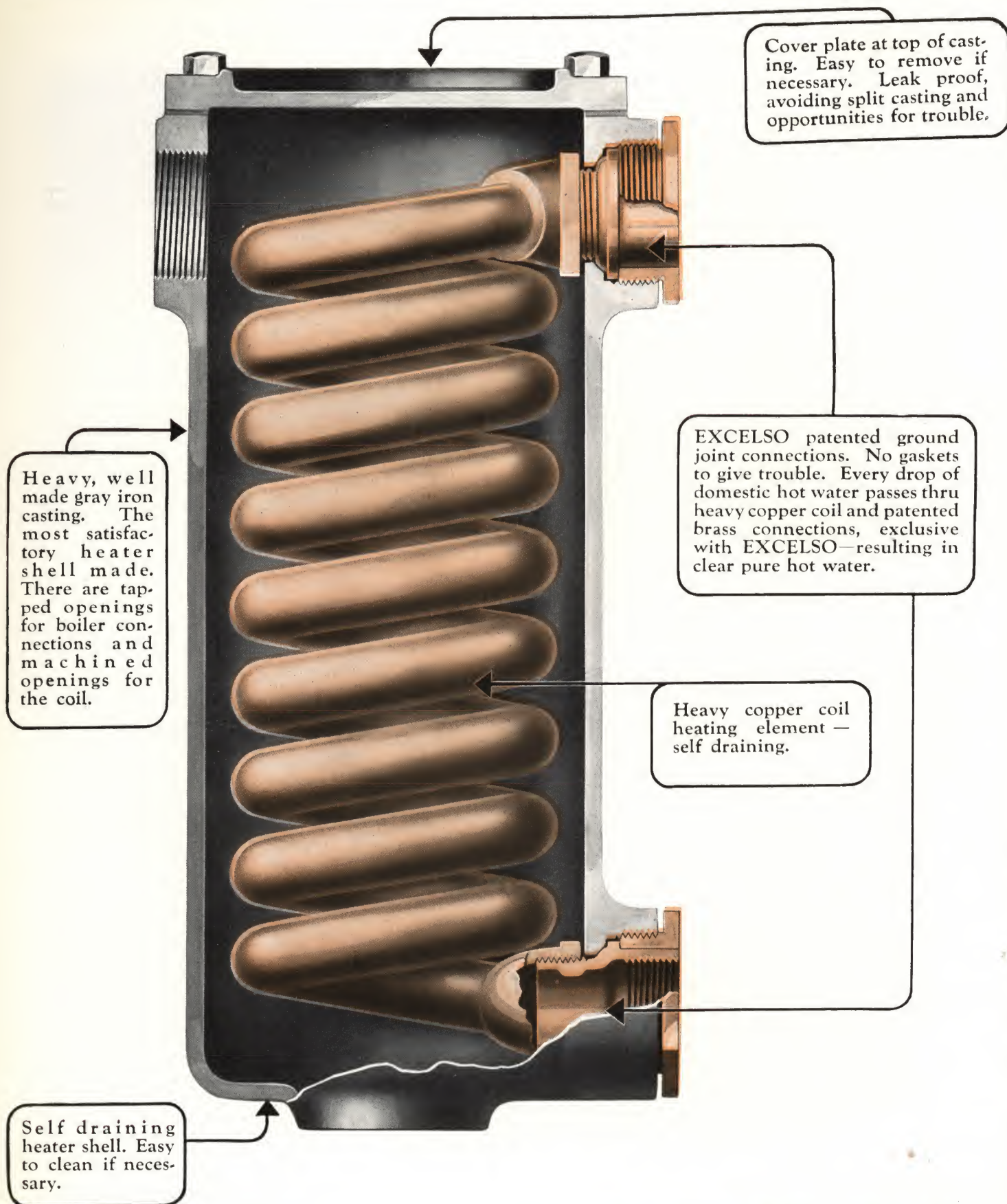


EXCELSCO Indirect Heaters used in this Chicago business and apartment building are just typical of their use in all parts of the country. Architects, engineers, builders and owners appreciate low cost hot water produced by EXCELSCO.

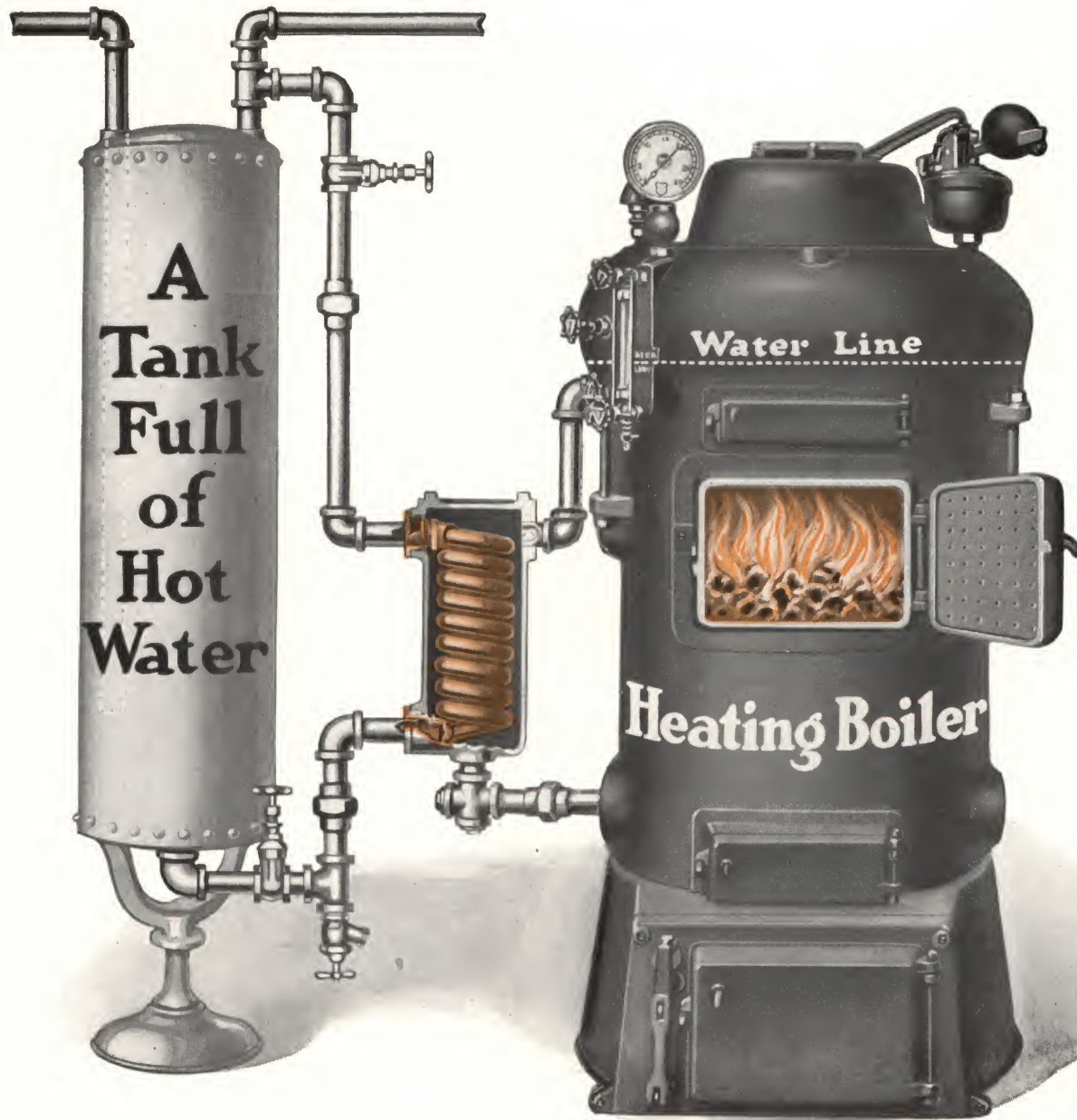


FAMILY OR ONE HUNDRED FAMILIES

EXCELSO SUPPLIES HOT WATER



SIZES TO HEAT WATER FOR ONE



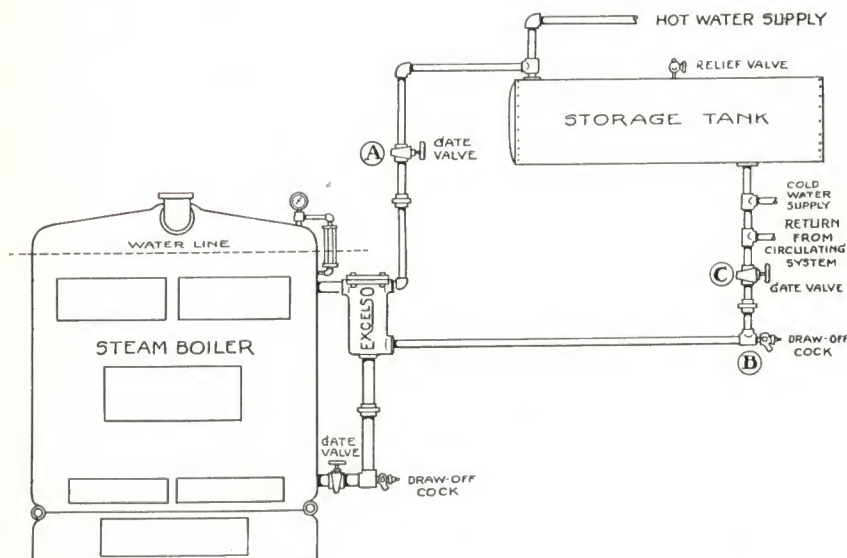
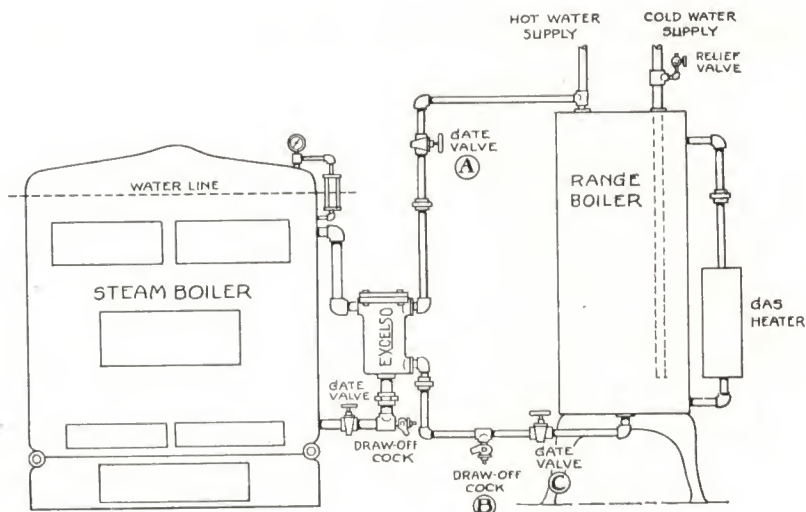
Typical Installation

Showing EXCELSO Indirect Water Heater connected to round cast iron boiler—thousands of these typical installations giving satisfactory service in all parts of this country and Canada. Note simplicity of connections. The heating boiler warming the house and domestic hot water supply at the same time—one fire doing double duty. Consider the money saved by using EXCELSO Water Heaters.

EXCELSO SUPPLIES HOT WATER

No. 1

Typical installation, EXCELSO Indirect Water Heater connected to steam or vapor heating boiler and to vertical tank or range boiler.

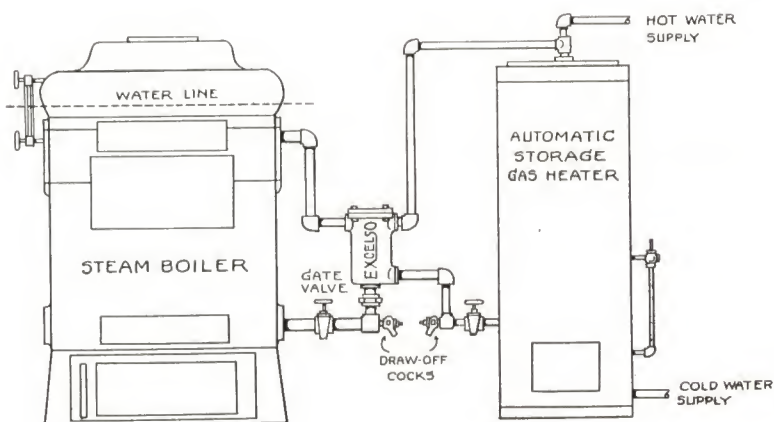


No. 2

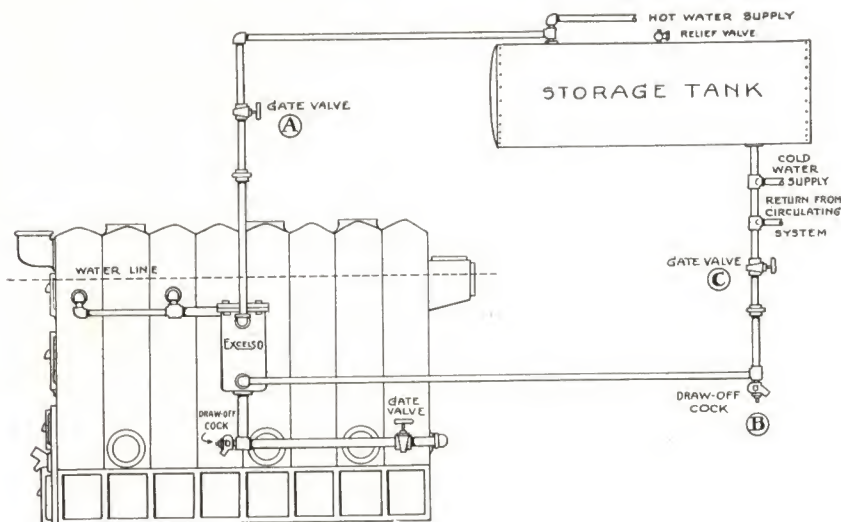
Typical installation, EXCELSO Indirect Water Heater connected to sectional heating boiler with horizontal tank and connections.

No. 3

Typical installation, EXCELSO Indirect Water Heater connected to house heating boiler and cross-connected to automatic gas storage heater or electric type storage heater, showing valves and draw-off cock.



SIZES TO HEAT WATER FOR ONE

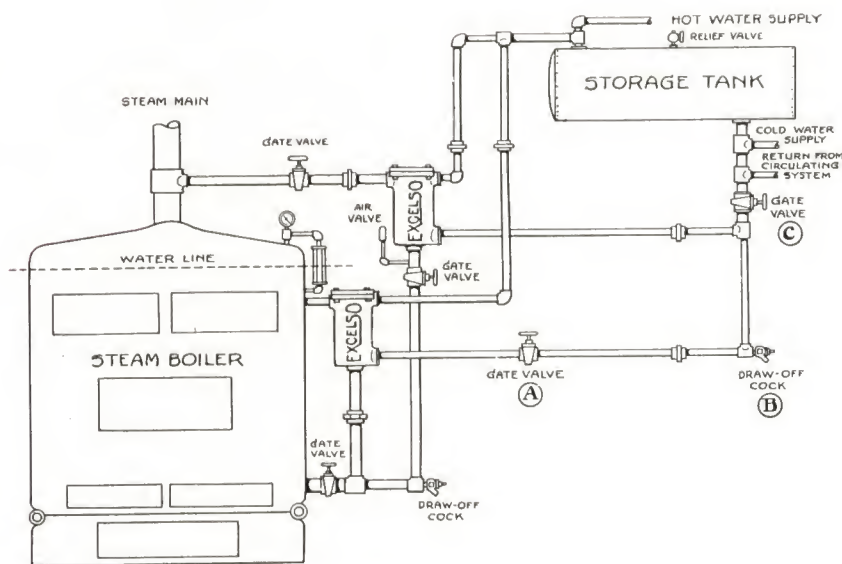
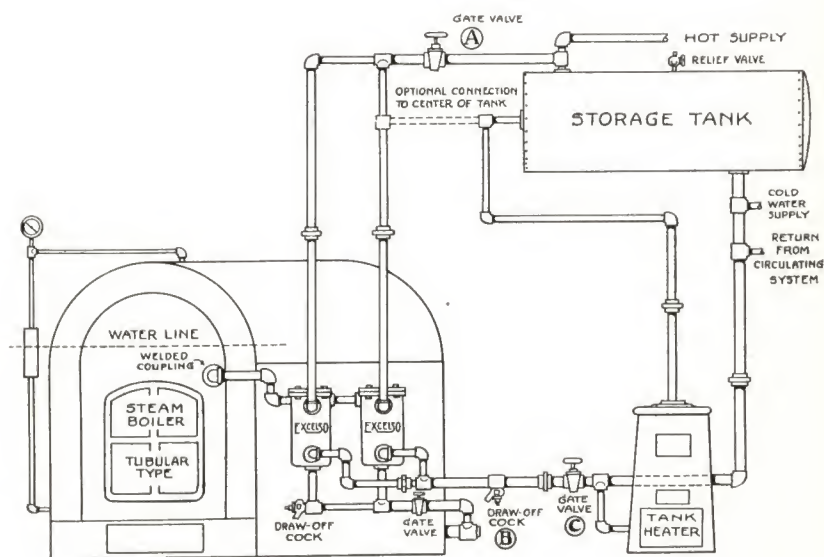


No. 4

Typical installation, EXCELSO Indirect Water Heater, showing two or more tapplings on sectional steam boiler. Multiple tapplings increase temperature of hot water supply.

No. 5

Typical installation of two or more EXCELSO Indirect Water Heaters connected to steam or vapor boiler. These multiple units take care of large quantities of hot water. Important: Coupling welded into head of steel boiler for pipe connections. Many steel boilers now being tapped for EXCELSO unit.

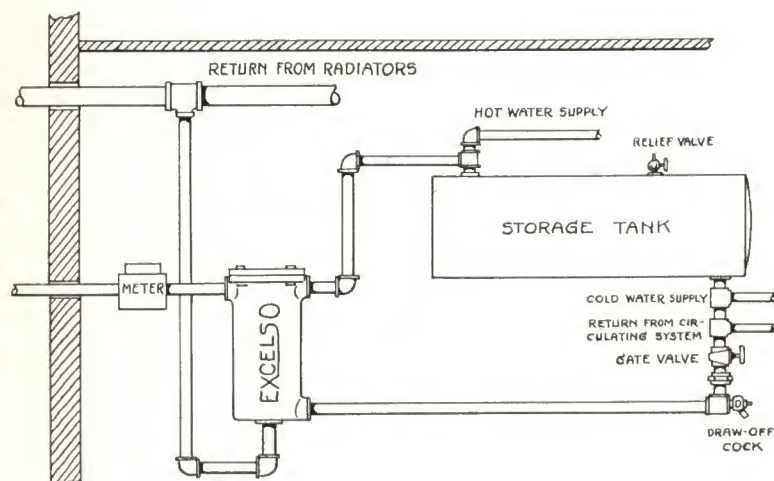
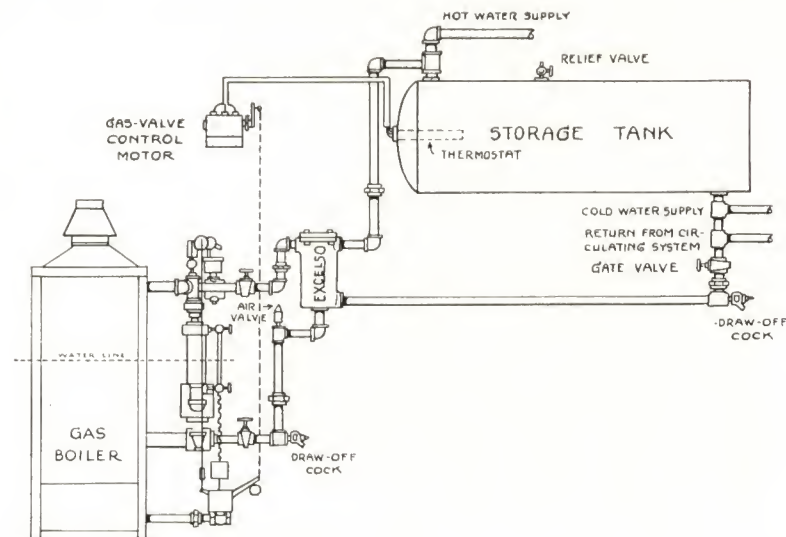


No. 6

EXCELSO Dual Method, using one or more heaters below water line and one or more above. Do not bush openings in any EXCELSO installation. Equalize pipe areas.

No. 7

EXCELSO Indirect Heater connected to modern gas boiler—showing connections and valves. Assures clean hot water. Takes pressure off gas boiler. Produces hot water at low cost.

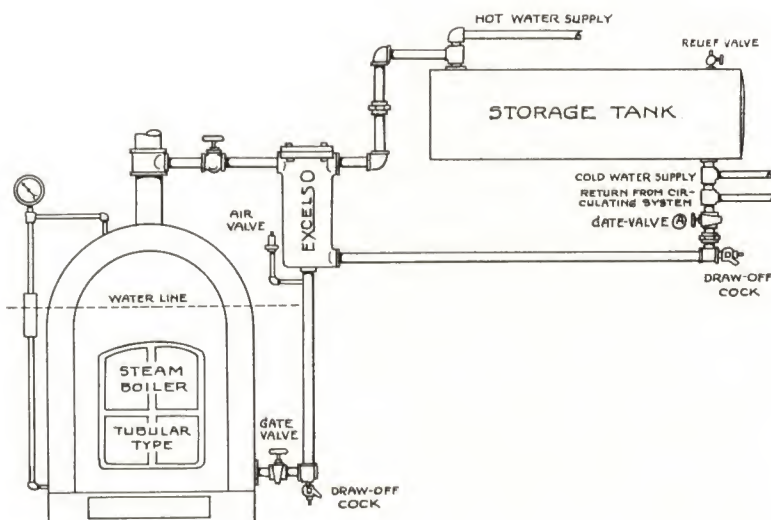


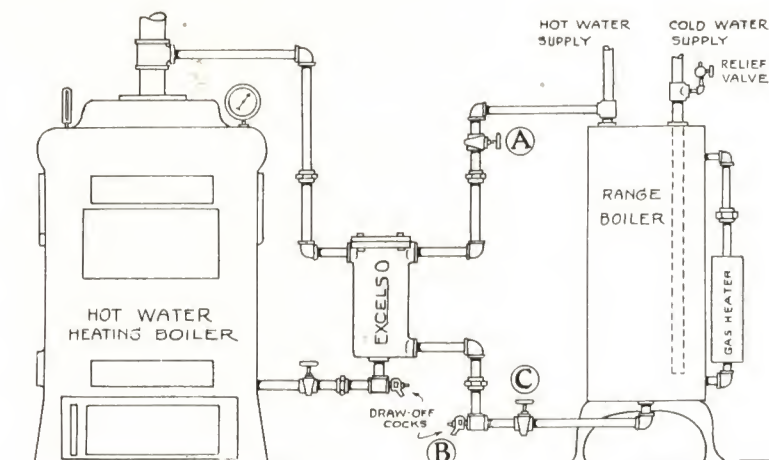
No. 8

EXCELSO Indirect Heater used with District Heating Plant. Hot water at low cost from condensate. Also used with direct steam.

No. 9

EXCELSO Indirect Heater connected above water line. This increases the capacity of heater—see table of capacities when used with live steam, page 11. Where high pressure steam is used we recommend pressure reducing valve.



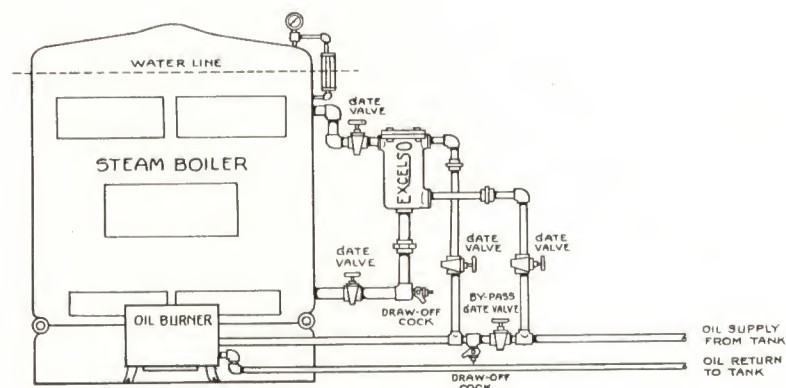
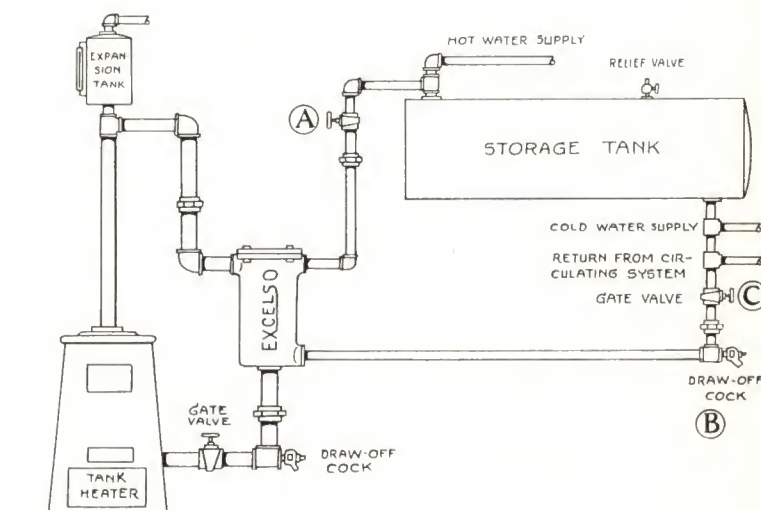


No. 10

EXCELSO Indirect Heater connected to hot water heating boiler and range boiler. Care should be taken to connect EXCELSO between flow and return mains when used with hot water heating boiler. Gas heater may be brought into use when high temperature domestic supply hot water is required.

No. 11

Method of using EXCELSO Indirect Heater, reducing city water pressure on direct connected tank heater, by running city water supply through EXCELSO. Also assures clean hot water as all water being heated by EXCELSO travels through copper and brass.

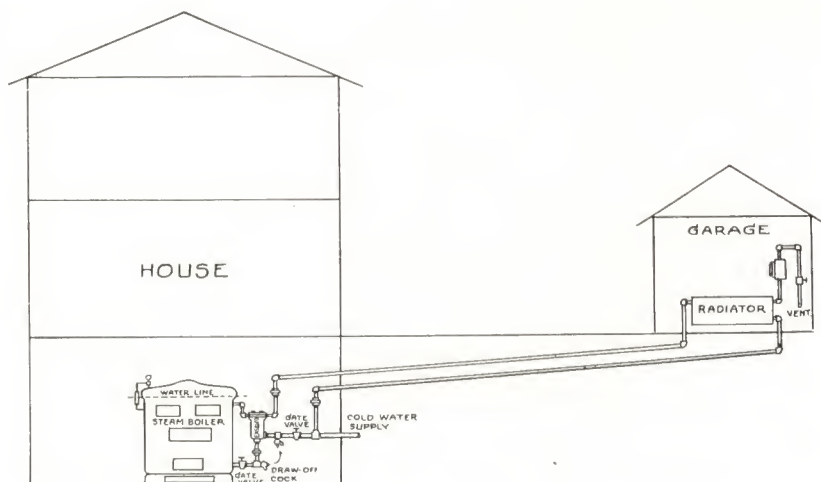


No. 12

Typical installation using EXCELSO Indirect Heater for pre-heating oil. Gray Heaters made with admiralty metal coils for heavy oil at same price as regular EXCELSO Heaters.

No. 13

Typical installation, EXCEL SO Indirect Heater, for warming radiator in garage. All piping to the garage should be well covered to prevent heat loss. Care should be taken to avoid freezing if system is not operated during winter season. Expansion tank may be installed in house, if convenient, or garage as shown.



Hot Water Radiator Heating Capacities of EXCEL SO Indirect Heaters

Many EXCEL SO Indirect Heaters are used to supply hot water radiation for warming enclosed verandas, garages, or additions to a home or store building. To figure the hot water radiator heating capacity of an EXCEL SO Indirect Heater, multiply the below water line capacity of the heater by 1.5.

For example, a No. 11 Heater has a 30 gallon hot water capacity. Multiplied by 1.5 gives 45 sq. ft. hot water radiation.

When computing the load on the EXCEL SO, figure all mains and risers as heating surfaces. Follow out standard hot water radiator heating practice.

Hot Water Fixture Capacities*

For Various Types of Buildings

Figured at final recapitulation of 150° F. gallons of water per hour per fixture. Gallonage indicated is ample for average requirements, but on account of varying installation conditions and temperatures of water required, this table is given only as a guide.

	Apt. House	Club	Gym.	Hos- pital	Industrial Plant	Hotel	Laun- dry	Office Bldg.	Public Bath	Private Res.	School	Y. M. C. A.
Basin Private Lavatory	3	3	3	3	3	3	3	3	3	3	3	3
Basin Public Lavatory	5	5	5	8	15	8	5	5	8	—	10	10
Bathtub	15	15	30	30	30	30	—	—	30	15	—	30
Dishwasher	15	30	—	30	30	30	—	—	—	15	15	30
Foot Basin	3	3	12	3	—	3	—	—	—	—	—	—
Kitchen Sink	10	20	—	20	20	20	—	—	—	10	10	20
Stationary Laundry Tubs	25	35	—	35	—	35	42	—	—	25	—	35
Pantry Sink	10	20	—	20	—	20	—	—	—	10	20	20
Showers	80	150	150	80	200	100	—	—	200	80	200	200
Slop Sink	20	20	—	20	20	30	10	15	15	15	20	20
Dishwasher	200 gallons per hour at 180° F. for serving capacity of 500 people											
Total water for all fixtures likely to be drawn at one time	35%	60%	80%	75%	90%	75%	100%	20%	100%	50%	25%	75%
Storage Capacity as compared to Max. Heating Capacity	35%	40%	40%	45%	50%	45%	50%	40%	50%	30%	40%	50%

*C. H. THURING

EXCELSO Indirect Water Heater Capacities

DIMENSIONS—PRICE LIST—CAPACITIES

	Single Coil						Double Coil				Triple Coil	
Size	Jr.	11	12	13	14	15	25	26	27	28	35	36
Length, inches	8½	10½	14	11½	15	19½	12½	15	19	23¼	21	25
Diameter Shell, inches	5	5	5	6½	6½	6½	9	9	9	9	13¾	13¾
Shell Openings, inches	1	1	1	1½	1½	1½	2	2	2	2	3	3
Coil Openings, inches	¾	¾	¾	1	1	1	1½	1½	1½	1½	2½	2½
C to C of Coil Openings, inches	5¾	7½	10½	7½	11¾	15¼	6¾	8¾	13½	17¾	13½	17¾
Weight Crated, pounds	11	13	16	29	37	42	65	73	88	103	185	210
List Price	\$12.50	\$30	\$40	\$50	\$60	\$70	\$120	\$150	\$180	\$210	\$310	\$400

Heating Water Below Water Line of Steam or Vapor Boilers

Size	Jr.	11	12	13	14	15	25	26	27	28	35	36
Tank Capacity, gallons	30	30	45	60	90	120	160	200	300	400	600	800

Temperature rise, 100 degrees in 3 hours

Heating Water With Live Steam

Size	Jr.	11	12	13	14	15	25	26	27	28	35	36
Tank Capacity, gallons	45	50	75	100	150	200	250	300	450	600	900	1200

Temperature rise, 100 degrees in 3 hours at 5 pounds pressure

Hot Water Radiator Heating Capacities

Size	Jr.	11	12	13	14	15	25	26	27	28	35	36
Radiator Capacity, square feet	45	45	67	90	135	180	240	300	450	600	900	1200

Instructions for Ordering Heaters

Many tanks are installed too small, and heaters should ALWAYS be ordered to CORRESPOND with WORK REQUIRED and NOT size of tank. Also make liberal allowance if circulating system is used.

NOTE—The Heavy Duty Double Coil Heaters—sizes, 25-26-27 and 28, take care of installations up to 400 gallons. Heaters Numbers 35 and 36 with Triple Coils for installations up to 800 gallons. They can be doubled up in batteries of two or more, making excellent installations where large quantities of hot water are required.

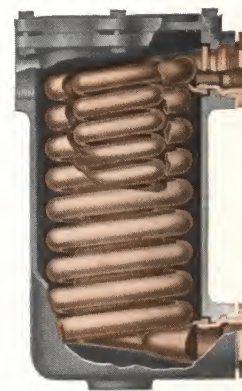
DO NOT BUSH SIZE OF OPENINGS IN SHELL OF HEATER.



Cut Open View
EXCELSO Single Copper
Coil Heater showing
patented ground joint
brass connections.



Cover Plate removed on
EXCELSO Triple Copper
Coil Heater showing coil
and brass connections.



Cut Open View
EXCELSO Double Copper
Coil Heater showing
patented ground joint
brass connections.

EXCELSO Fire Pot Water Heating Units

A complete line of Water Heating Units for domestic hot water supply and auxiliary radiation for use in connection with hot water boilers and warm air furnaces. A wide range of sizes is available. Heaters will supply from 30 to 250 gallons of hot water and to 400 feet of radiation.



EXCELSO Phaeton Water Heater

Made in six sizes—constructed so as to be easily installed and to occupy a minimum amount of space in the fire pot. They range in size from 30 to 250 gallons capacity for water heating and from 40 to 400 square feet of hot water radiation. Large, well designed heating surface, ease of installation and remarkable efficiency make EXCELSO Phaeton Heaters outstanding in their field. Made in Cast Iron, Brass and Galvanized Iron.



EXCELSO Fire Pot Generator

Made in two sizes, so designed that when installed is located above the fire. Will not interfere with combustion or firing of the boiler or furnace. Highly efficient construction. Far superior to the pipe coil for hot water supply.

No. 1—40 gallons capacity

No. 2—60 gallons capacity

Made in Cast Iron, Brass and Galvanized Iron.



EXCELSO Fin Pin Heater

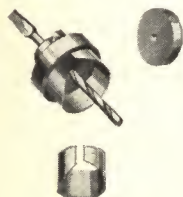
Low-priced, down in the fire water heater, made in two sizes. The fins on the side of the heater prevent clinkers forming around the unit and allow air passage which eliminates deadening of the fire so common where pipe coils are installed directly into the fire.

No. 30—30 gallons tank capacity

No. 40—40 gallons tank capacity

Made in Cast Iron, Brass and Galvanized Iron.

EXCELSO Rotary Hack Saw Tool



The EXCELSO Rotary Hack Saw tool is especially designed for cutting holes in boiler sections, tanks, through stone, wood or any other material. Cuts four sizes of holes suitable for accommodating pipe taps without reaming or any extra work. A true dollar-saving device which should be found in every tool kit. The tool with eight blades (two each of 1", 1 1/4", 1 1/2" and 2") sells at \$7.50.

Tank Capacities in U. S. Gallons

Lgth. in Feet	Diameter in Inches																
	12"	18"	24"	30"	36"	42"	48"	54"	60"	66"	72"	78"	84"	90"	96"	102"	108"
1	6	13	24	37	53	72	94	120	145	180	210	250	290	330	375	425	475
2	12	26	48	74	106	144	188	240	290	360	420	500	580	660	750	850	950
3	18	39	72	111	159	216	282	360	435	540	630	750	870	990	1125	1275	1425
4	24	52	96	148	212	288	376	480	580	720	840	1000	1160	1320	1500	1700	1900
5	30	65	120	185	265	360	470	600	725	900	1050	1250	1450	1650	1875	2125	2375
6	36	78	144	222	318	432	564	720	870	1080	1260	1500	1740	1980	2250	2550	2850
7	42	91	168	259	371	504	658	840	1015	1260	1470	1750	2030	2310	2625	2975	3325
8	48	104	192	296	424	576	752	960	1160	1440	1680	2000	2320	2640	3000	3400	3800
9	54	117	216	333	477	648	846	1080	1305	1620	1890	2250	2610	2970	3375	3825	4275
10	60	130	240	370	530	720	940	1200	1450	1800	2100	2500	2900	3300	3750	4250	4750
11	66	143	264	407	583	792	1034	1320	1595	1980	2310	2750	3190	3630	4125	4675	5225
12	72	156	288	444	636	864	1128	1440	1740	2160	2520	3000	3480	3960	4500	5100	5700
13	78	169	312	481	689	936	1222	1560	1885	2340	2730	3250	3770	4290	4875	5525	6175
14	84	182	336	518	742	1008	1316	1680	2030	2520	2940	3500	4060	4620	5250	5950	6650
15	90	195	360	555	795	1080	1410	1800	2175	2700	3150	3750	4350	4950	5625	6375	7125
16	96	208	384	592	848	1152	1504	1920	2320	2880	3360	4000	4640	5280	6000	6800	7600

The Warranty

EXCELSo Indirect Water Heaters are conservatively rated and, when heaters of correct capacity are properly connected to steam or vapor heating boilers, will give satisfactory hot water supply as long as the boiler is being fired.



Excelso Products Corporation

65 CLYDE AVENUE

BUFFALO, N. Y.

EXCELSO

Indirect

WATER HEATERS



**SIZES TO HEAT WATER
FOR ONE FAMILY OR
ONE HUNDRED FAMILIES
SOLD AND INSTALLED
BY ALL PLUMBING AND
HEATING CONTRACTORS**

**NATIONALLY DISTRIBUTED BY LEADING WHOLESALERS
AND BOILER AND RADIATOR MANUFACTURERS**

EXCELSO

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BY ALL PLUMBING AND HEATING CONTRACTORS

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